REMARKS/ARGUMENTS

In view of the foregoing amendments and the following remarks, applicant respectfully submits that the pending claims are statutory under 35 U.S.C. § 101 and are not rendered obvious under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, applicant respectfully requests that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.

The applicant will now address each of the issues raised in the outstanding Office Action.

Objections

Claims 60 and 61 were found to include allowable subject matter, but were objected to as depending from a rejected base claim. Each of these claims has been rewritten in independent form to include the features of rejected base claim 29. Accordingly, these claims are now in condition for allowance.

Rejections under 35 U.S.C. § 101

Claims 34 and 35 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The applicant respectfully requests that the Examiner

reconsider and withdraw this ground of rejection in view of the following.

These claims were rejected as being directed to printed matter, such as a piece of paper. These claims have been amended to more clearly recite that they are directed to a computer-readable storage medium. Accordingly, these claims are statutory.

Rejections under 35 U.S.C. § 103

Claims 2-17, 20-28, 37-39, 63, 71 and 73-78 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,721,269 ("the Cao patent") in view of U.S. Patent No. 6,765,921 ("the Stacey patent") and U.S. Patent Application Publication No. 2002/0095493 ("the Byrnes publication") The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Before addressing at least some of the patentable features of various claims, applicant will first introduce each of the cited references.

The Cao Patent

The Cao patent concerns predetermining primary and secondary (for backup) label-switched paths (LSPs). The source (or ingress) router determines the LSPs and defines nodes in explicit routes (ERs). The sink (or egress) router selects one of the determined LSPs to use, as well as a secondary LSP. Nodes can determine other nodes within an abstract router (a representation of a group of routers) if the node specified in the ER path is a "loose node". The Cao patent does not teach a message

including a path determination constraint(s) expressed as a program including one or more executable instructions.

The Byrnes Publication

The Byrnes publication concerns an automatic traffic control computer (ATCC) which controls QoS parameters such as response time, jitter, throughput and utilization, and which is independent of topology. (See paragraphs [0011] and [0012].) The ATCC does so by (1) collecting queue state information from a sample or subset of intermediate nodes of a communication network (See paragraph [0026].), and (2) constructing a traffic intensity surface and traffic intensity maps using the collected queue state information in conjunction with a mathematical model (See paragraph [0027].). The mathematical model is done as a spatial and temporal function, and will typically be a partial differential equation ("PDE"). (See paragraph [0040].) Paths are determined by the ATCC. (See paragraphs [0065]-[0069].) The determined paths are then projected onto the actual links and intermediate nodes of the network. (See paragraph [0071].)

The Stacey Patent

The Stacey patent uses Constraint Routed Label Distribution Protocol (CR-LDP) or RSVP-Traffic Engineering (RSVP-TE) to establish constraint-based routed label switched paths (CR-LSPs). (See column 3, lines 30-60.) Abstract nodes, which may be a sub-network including one or more real nodes (core nodes), may be

used to simplify VPN management. (See column 3, line 62 through column 4, line 9.) The common open policy service protocol (COPS) may be used to formulate service level agreements and constraints to be applied to LSPs. Referring to Figure 6, the super-ordinate manager 60 pushes the COPS commands to the ingress label-switched router (LSR) and also to an admission manager (AM) 64 within a media gateway controller 65. The AM 64 then pushes the COPS messages down to the LSRs of the network. The LSRs then use the COPS messages to invoke RSVP-TE or CR-LDP sessions in order to establish a VPN. (See column 5, lines 39-60.)

Having introduced the cited art, applicant will now discuss various patentable features of the claimed invention.

First, since claims 4, 7, and 73-78 have been canceled, this ground of rejection is rendered moot with respect to these claims.

Second, please note that claim 71 depends from allowed claim 36 and is therefore allowable by virtue of its dependency.

Claims 2, 3, 5, 6, 8-17, 20-28, 37-39, 53 and 63

As amended, independent claims 5, 6, 11, 20 and 37-39, recite that at least one network path determination constraint (carried in a message from another network node, or to be sent to another network node) is expressed in the form of a program including one

or more executable instructions. Signaling path constraints in this way is advantageous since it permits nodes (e.g., routers) to provide an extensible, interoperable way to communicate constraints. (See, e.g., page 14, lines 16 and 17, and page 43, lines 1-3 of the present application.)

The Examiner concedes that the Cao patent does not teach this feature. To compensate for the admitted deficiency in the Cao patent, the Examiner apparently relies on the Stacy patent, noting that COPS messages are pushed to LSRs where they are used to invoke or execute RSVP. (See Paper No. 20050928, page 4.) However, the claims, as amended, now recite that at least one network path determination constraint (e.g., carried in a message from another network node, or to be sent to another network node) ***is expressed in the form of a program including one or more executable instructions***. This distinguishes the claimed invention over a message which, when received, invokes a protocol such as RSVP.

Accordingly, even assuming, arguendo, that one skilled in the art would have been motivated to combine these references as proposed by the Examiner, independent claims 5, 6, 11, 20 and 37-39 are not rendered obvious by the Cao patent, the Stacey patent and the Byrnes publication for at least the foregoing reason. Since claims 2, 3 and 8-10 and 12-17 each depend, either directly or indirectly, from claim 11, they are similarly allowable. Since claims 53 and 63 depend from claims 5 and 6, respectively, these claims are also allowable. Since claims 21-28 depend, either directly or indirectly, from claim 20, these claims are similarly allowable.

Claims 29, 30, 31, 33-35 and 57 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,665,273 ("the Goguen patent") in view of U.S. Patent No. 6,000,028 ("the Chernoff patent"). The applicant respectfully requests that the Examiner reconsider and withdraw this ground of rejection in view of the following.

The Examiner relies on the Goguen patent as teaching various information implemented via algorithms -- executable code, citing column 3, line 48 through column 4, line 7. (See Paper No. 20050928, page 6.) However, the background section of the Goguen patent cited by the Examiner merely concerns constraint-based routing in which (1) an operator specifies the amount of traffic that is expected to flow in a TE tunnel, and (2) an MPLS-TE system calculates paths based on constraints suitable for carrying the load and establishes explicit paths. To the extent that executable code is used to implement various constraint-based routing information, it is neither taught, nor suggested, that such code was is, or is to be carried in messages. Thus, even assuming arguendo, that the Goguen and Chernoff patents teach what is alleged by the Examiner, and further assuming, arguendo, that one skilled in the art would have been motivated to combine the references as proposed by the Examiner, independent claims 29 and 34 are not rendered obvious by the Goguen and Chernoff patents for at least the foregoing reason. Since claims 30, 31 and 33 depend from claim 29, and since claims 35 and 57 depend, either directly or indirectly from claim 34, these claims are similarly allowable.

Claim 32 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over the Goguen patent in view of the Chernoff patent as applied to claims 29 and 31, and further in view of the Cao patent. However, since the purported teachings of the Cao patent fail to compensate for the deficiencies of the Goguen and Chernoff patents with respect to claim 29 above, claim 32 is similarly not rendered obvious.

Treatment of claims 54 and 55

Although the Office Action Summary form PTOL-326 indicates that claims 54 and 55 are rejected, the office action does not provide a basis for rejecting these claims. In the previous amendment, claims 54 and 55, which were found to include allowable subject matter, were rewritten in independent form to include the features of the rejected base claim and any intervening claims. Thus, it is believed that these claims were intended to be allowed.

New claims

New claims 79-84 depend from claims 5, 6, 11 and 37-39 respectively, and further defined the claimed invention over the cited art.

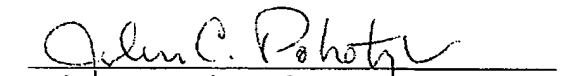
Conclusion

In view of the foregoing amendments and remarks, applicant respectfully submits that the pending claims are in condition for allowance. Accordingly, applicant

requests that the Examiner pass this application to issue.

Respectfully submitted,

April 3, 2006



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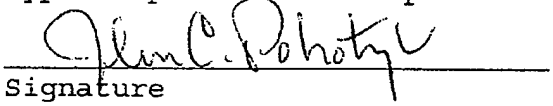

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